

Facial Recognition and Soft Biometric tracking systems used by UK Police

The introduction of biometric technologies used on UK citizens, without prior consent or parliamentary and public consultation.

Pippa King

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Introduction

Use of biometric technology to verify and identify individual people is in its infancy, with little UK statutory regulation on how an individual's biometric data can be processed, stored, transferred, or used. Legislation tends to occur after such biometric technologies are employed and ensuing weaknesses identified, such as the retention of DNA by the Police and the use of biometric technology in schools. The use of facial recognition systems and (sometime in 2015) soft biometric tracking software are being used in the UK, both regionally and nationally, without any public or parliamentary debate or regulation and standards in place.

Current situation

Nationally

Police National Database (PND):

- Started using biometric facial recognition on 28th March 2014 using Canadian [CGI](#) hardware and German [Cognitec](#) facial recognition software.
- [BBC reported](#) in February 2015 that there were 18 million facial images on the PND however a [Freedom of Information request \(FOIR\)](#) in March 2015 stated that the PND stored "13.7 million facial images, with an undetermined number of duplicates. It should also be stressed that ACPO [Association of Chief Police Officers] does not know how many different people are represented by the images."
- A stand-alone Cognitec facial recognition database with transferred PND custody images on.
- Cost - [£1,168,758 to implement](#)
- Data Controllers are each police forces Chief Officer.
- CC Mike Barton, Chief Constable of Durham Constabulary, is the National Police Chiefs Council (NPCC) lead for the PND as Chair of the Cross Business Area Working Group on Facial Images

Overview:

In November 2014 the House of Commons Science and Technologies Committee held an inquiry to look at the '[Current and future uses of biometric data and technologies](#)' in which "*The inquiry looks at how technologies relying on biometric data to authenticate identity have been used predominately by Government authorities ...and whether regulations in this emerging field are adequate.*"

The committee received 33 written submissions and heard 13 oral evidences. It emerged during the inquiry that facial recognition technology is being run on the PND and used by national police forces. During the enquiry the Biometrics Commissioner, Alasdair MacGregor QC, [stated](#) his "*concern is that it [facial recognition technology] has become a reality perhaps without the issues being properly discussed*" with regards to the PND applying facial recognition software.

In both the written submissions to the inquiry from the [Home Office](#) and the [Association of Chief Police Officers \(ACPO\)](#) (both dated November 2014) there was no mention of the PND using facial recognition software.

In December 2014 the UK Biometrics Commissioner, Alasdair MacGregor QC, published his first [annual report](#) in office. In it he detailed the extent of his knowledge of the UK Police's use of biometric facial recognition technology used on the Police National Database.

"In January of 2014 I became aware that the police were actively investigating the possibility of uploading custody photographs to the Police National Database ('the PND') and of applying automated facial recognition technology to those images. I asked to be kept abreast of developments in that connection and of any relevant pilot testing. At the beginning of April of 2014 I was invited to attend a meeting in Durham of the ACPO Facial Recognition Working Group. At that meeting I was informed that some 12 million custody photographs had been uploaded to the PND and that an automated searching mechanism had 'gone live' five days previously."

In fact the facial recognition system, supplied by [CGI](#) and [Cognitec](#), went live on the 28th March 2014. (See [Freedom of Information response](#) answer to Q1).

In a [second written submission](#) from the Home Office (dated January 2015) to the Science and Technologies Committee looking at 'Current and future uses of biometric data and technologies' the Home Office states:

"The Home Office would have known about police plans to include facial searching in PND on 1 October 2012. It is possible it may have had some indication of those plans in the months leading up to that point."

The Home Office took control of the PND on 1st October 2012 when the National Policing Improvement Agency disbanded. As early as October 2012 ACPO minuted discussion of implementing facial recognition software on the PND, [see point 17](#) of the Chief Constables Council meeting, and subsequently 16 months later in March 2014 the facial recognition system went 'live'.

The biometric facial recognition system was implemented on the PND without any discussion outside the Home Office or ACPO. Parliament and the public were completely unaware identifying biometric technology was being used on with photographs of members of the public.

Freedom of Information requests were sent to ACPO and the Home Office. Both bodies were unable to answer questions on how many positive matches had been made, how many false positives, how many arrests had been made based on facial recognition searches and how many faces on the PND were of innocent people.

Freedom of Information request and response to ACPO [here](#).

Freedom of Information request and response to the Home Office [here](#)

It appears that as per Freedom of Information request responses:

There has been no Privacy Impact Assessment (PIA) carried out on the PND facial recognition system. The ICO's own policy on [states](#) regarding PIAs *"Does the project involve you using new technology which might be perceived as being privacy intrusive? For example, the use of biometrics or facial recognition."*

- ACPO FOIR response – *"ACPO does not hold information captured by your request. A consideration for you may be to make a request with the Home Office."*
- Home Office FOIR response - *"The Home Office does not hold a Privacy Impact Assessment specific to the facial recognition system."*

There is no record nationally of how many individual persons photographs are on the PND.

- ACPO FOIR response - *“There are 13.7 million facial images, with an undetermined number of duplicates. It should also be stressed that ACPO does not know how many different people are represented by the images.”*
- Home Office FOIR response - *“This information is not held by the Home Office”*

There is no way nationally of registering positives matches, false positive matches, negative matches or false negative matches

- ACPO FOIR response - *“A total of 4000 facial searches were submitted between 28/03/2014 (when the functionality was released to users) and 17/02/2015. ACPO are not able to break this search down to the criteria requested”*
- Home Office FOIR response – *“While the number of searches conducted within a period can be given, information on the breakdown of searches is not held by the Home Office and is not captured as facial search is not used to make a positive identification, but to suggest lines of enquiry.”*

There is no knowledge nationally what percentage (or number) of images held on the facial recognition database are of persons who have not been found guilty of a crime?

- ACPO FOIR response - *“ACPO does not hold information captured by your request. We are not required to create information in order to respond to an FOI request”*
- Home office FOIR response - *“This information is not held by the Home Office but by individual forces”*

There is no knowledge nationally how many images have been deleted from the PND.

- ACPO FOIR response - *“ACPO does not hold information captured by your request.”*
- Home Office response - *“This information is not held by the Home Office.”*

With regards to the PND running facial recognition technology on images of members of the public according to a [written question](#) asked in the House of Lords, *“The Government is reviewing the framework within which the police use these custody images, and expects to be able to report in the Spring.”* This report is now [due September 2015](#) delayed from Spring 2015.

Regionally

Metropolitan Police:

- Started using biometric facial recognition in 2009 using L1 Identity Solutions ABIS (Automated Biometric Information System) Face Examiner. [L1 Identity systems](#) were [acquired](#) by [Safran](#) in 2011, a French aerospace defence and securities company, and now operates as [Morpho Trust](#).
- A stand-alone facial recognition database of 2.9 plus million custody suite images transferred from the Metropolitan Police's database to the Morpho database.
- Cannot be operated in 'real time' in the field.
- No images are stored on the database other than custody suite images.
- No PIA carried out.
- No record of how many innocent peoples images are on the facial recognition database.
- Data Controller is Sir Bernard Hogan-Howe.

(For additional information please see [FOIR response](#) from the Metropolitan Police)

Leicestershire Police:

- Started trialling biometric facial recognition in April 2014 using [NeoFace](#), supplied by [NEC Corporation](#) a Japanese communications company.
- A stand-alone facial recognition database of 100,000 custody suite images transferred from Leicestershire Police's database onto the NeoFace database.
- No images are stored on the database other than custody suite images.
- Cost – unknown, Leicestershire Police declined to answer this under FOIR citing Section 43 of the Freedom of Information Act Commercial Interest.
- Custody Suite Facial Recognition cannot be operated in 'real time' in the field.
- [PIA done](#).
- Remote in the field 'real time' use of facial recognition at the Download Music Festival June 2015, system used NEC Corporation's [NeoFace Watch](#). Technology was supplied free by NEC, Leicestershire Police do not own. Evaluation of the trial results not available from Leicestershire Police as it was "[a 'proof of concept trial' NEC have the evaluation of this product.](#)"

(For additional information please see [FOIR response](#) from the Leicestershire Police)

In the above FOIR response, received 12th March 2015, from Leicestershire Police stated *"Our data base is a stand-alone system so the information would have to be relayed to us and wouldn't be available for use in 'real time'."* Yet three months later, on the second weekend in June 2015, Leicestershire Police deployed a mobile 'real time' facial recognition system at the Download Music Festival on 90,000 festival goers. A database of custody suite images from a Europol database was specially created for the event with CCTV/IPTV cameras strategically placed in the festival grounds for the facial recognition system. Leicestershire Police are unable to offer and evidence of evaluation as NEC ran their technology as a test and NEC have the evaluations on this real time facial recognition. See The Register article on this topic [here](#).

[According to The Register](#) the Surveillance Commissioner has arranged a meeting with 'Leicestershire Police's chief constable, Simon Cole, specifically to discuss the force's secrecy about its surveillance technology at Download'.

There is a Freedom of Information request to Leicestershire Police on the use of facial recognition at the Download Music Festival [here](#).

The original [Freedom of Information response](#) from Leicestershire Police revealed interest in NeoFace from other regional and international police forces: Lancashire Police, North Wales Police, Northamptonshire Police, the Metropolitan Police, Kent Police, Essex Police and the Police force in Northern Territories Australia.

Lancashire Police:

From a [FOIR to Lancashire Police](#): "Lancashire Constabulary are currently running an internal trial of the NeoFace system which is being sponsored by ACC Bates. The trial is very much in the early stages and at present Lancashire has no plans for either purchase of the system nor an operational roll out. If the force were to procure such a system then it would go through the full procurement exercise, PIA, etc."

North Wales Police:

From a [FOIR to North Wales Police](#): "it [facial recognition] is still under review and a decision has not been made."

Northamptonshire Police:

From a [FOIR to Northamptonshire Police](#): "We regularly review facial recognition systems but at present there are no organisational projects to pursue one"

Kent Police:

From a [FOIR to Kent Police](#): "Kent Police currently has no plans to introduce facial recognition technology, this is on the grounds of cost"

Essex Police:

From a [FOIR to Essex Police](#): "The force has attended a [facial recognition] meeting/presentation but at the moment they are still exploring future options."

Edinburgh City Council:

According to the [Liberal Democrat Party](#) Edinburgh as plans to run a facial recognition system behind the city's CCTV/IPTV network. The [Edinburgh Evening News](#) reports this as a 'body language recognition'- Soft Biometrics.

Soft Biometrics

Soft biometrics are "...characteristics such as height, weight, body geometry, scars, marks, and tattoos (SMT), gender, etc. These traits offer several advantages over traditional biometric techniques. Soft biometric traits can be typically described using human understandable labels and measurements, allowing for retrieval and recognition solely based on verbal descriptions. Unlike many primary biometric traits, soft biometrics can be obtained at a distance without subject cooperation and from low quality video footage, making them ideal for use in surveillance applications." [Reid et al](#)

Both Cognitec and NeoFace supply biometric systems that can track persons of interest in real time behind CCTV/IPTV (Internet Protocol TV) cameras using soft biometrics, body language. Also NEC supplied Leicestershire Police with their 'real time' facial recognition technology at the Download Music Festival June 2015.

Glasgow City Council:

[Glasgow 'smart' city](#) are working with [NICE Systems](#) to provide their city monitoring, with the largest Operations Centre in Europe costing £12 million, they have 550 fixed and 31 mobile HD IPTV cameras and, according to a [Glasgow City Council spokesperson](#), are planning to trial NICE System's '[Suspect Search](#)' using soft biometric tracking using CCTV/IPTV.

"Suspect Search has not yet been implemented. This is planned for mid-August 2015 with operational use commencing thereafter. Suspect Search is a sophisticated search engine which can use general descriptions of a person, such as height, hair colour or clothing to search recorded CCTV footage to try and locate that person."

[Freedom of Information request answer](#) 4th August 2015

Birmingham City Council – West Midlands Police:

ACPO's submission to the House of Commons Science and Technologies Committee inquiry into the 'Current and future uses of biometric data and technologies' [stated](#):

"In West Midlands Police, for example, the innovation partner Accenture are looking at the application of 'face in the crowd' technologies across the wealth of CCTV footage available. It is recognised that infrastructure challenges will need to be overcome for this technology to be applied successfully."

Face in the Crowd is [to help find 'missing persons'](#) but also capable tracking able persons - not just 'missing' adults - but normal law abiding people. In reply to a [FOIR](#) West Midland Police responded when asked if Face in the Crowd was implemented that it not been commissioned, they have no plans to implement and are not working with any companies but are considering "**potential opportunity**" of facial recognition.

Parliamentary Activity

UK Parliament

Asked by Lord Scriven 20 July 2015

Home Office - Police: Biometrics – HL1629

To ask Her Majesty's Government, further to the Written Answer by Lord Bates on 16 July (HL1344), in the light of the fact that some police forces, including the Metropolitan Police Service, have stopped adding faces to the National Database until the law has been clarified, why the Home Office has not yet distributed guidance about adding faces to the database until the review is complete.

Answered by: Lord Bates 30 July 2015

There are a number of police forces (including the Metropolitan Police Service) which do not, and never have, uploaded custody images to the Police National Database (PND). Of the Forces that have been uploading Custody Images to the PND, none have ceased doing so. Guidance on the operational uses of PND is issued by the National Police Chiefs Council.

Source: <http://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Lords/2015-07-20/HL1679/>

Asked by Lord Scriven 13 July 2015

Home Office - Police: Biometrics - HL1344

To ask Her Majesty's Government, further to the Written Answer by Lord Bates on 2 March (HL5118), whether the review of the framework within which the police use and retain custody images has been completed; if not, why not; and if so, what advice they have circulated to police forces.

Answered by: Lord Bates 16 July 2015

*The review is not completed and therefore no advice has been circulated to the Forces. It is very important that the issues identified by the review are properly tested with operational decision makers, so as to appropriately balance the protection of personal data and privacy with the public protection benefits and the operational need.
Due to the complexity of the issues raised in the evidence gathering stage and the number of important stakeholders, we now do not expect to complete the review and recommendations before September 2015.*

Source: <http://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Lords/2015-07-13/HL1344/>

Asked by Lord Scriven 03 February 2015

Home Office - Police: Biometrics -HL4664

To ask Her Majesty's Government what action they plan to take in the light of the uploading of photographs of faces by police forces in England and Wales onto a facial recognition database despite a previous court ruling that it could be unlawful.

Answered by: Lord Bates 09 February 2015

The use and retention of custody photographs taken by the police is a complex issue and needs careful consideration of the balance between public protection and civil liberties. The Government is reviewing the framework within which the police use these custody images, and expects to be able to report in the spring.

Source: <http://www.parliament.uk/business/publications/written-questions-answers-statements/written-question/Lords/2015-02-03/HL4664/>

Scottish Parliament

[Question S4T-01034: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 26/05/2015](#)

To ask the Scottish Government what its response is to reports that Police Scotland has been using facial recognition technology on images stored on the police national database.

Current Status: Taken in the Chamber on 26/05/2015 –

[Question S4W-24926: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015](#)

To ask the Scottish Government how many
(a) images used in connection with facial recognition technology and
(b) other images have been uploaded to
(i) the Police National Database and
(ii) other databases by Police Scotland and the legacy forces in each year since 2007, and when ministers were made aware of this.

Answered by Michael Matheson (25/03/2015):

The information requested is a matter for Police Scotland. I have alerted the Chief Constable to your question and I have asked him to reply to you direct.
Facial recognition technology is one aspect of the Police National Database service. That functionality was added in 2014. The number of images used and uploaded is not notified to Scottish Ministers.

[Question S4W-24922: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015](#)

To ask the Scottish Government what discussions it has had with the UK Government regarding police use of facial recognition technology.

Answered by Michael Matheson (25/03/2015):

The Scottish Government has not had any discussions with the UK Government regarding police use of facial recognition technology.

[Question S4W-24921: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015](#)

To ask the Scottish Government what funding it has provided to (a) investigate the potential for and (b) establish or maintain a facial recognition database for use by Police Scotland.

Answered by Michael Matheson (25/03/2015):

The Scottish Government has not provided any funding specifically for a facial recognition database.
Facial recognition is one element of the Police National Database services, the national information management system for police services across the UK to share intelligence to help prevent and detect crime to make communities safer.
Prior to the formation of Police Scotland in April 2013, the Scottish Government met the cost of the Police National Database services for legacy forces in Scotland. The costs are now met by Police Scotland directly to the Home Office, which is responsible for managing the system.

[Question S4W-24920: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015](#)

To ask the Scottish Government what (a) legislation and (b) rules are applied to Police Scotland's (i) use of facial recognition technology and (ii) retention of (A) personal, (B) custody-suite and (C) other images.

Answered by Michael Matheson (25/03/2015):

The information requested is a matter for Police Scotland. I have alerted the Chief Constable to your question and I have asked him to reply to you direct.

Question S4W-24919: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015

To ask the Scottish Government what discussions it has had with Police Scotland regarding the (a) use of facial recognition technology and (b) development or use of databases for facial recognition purposes, and whether this matter was discussed with the legacy forces.

Answered by Michael Matheson (25/03/2015):

The Scottish Government has not discussed these matters with Police Scotland or legacy forces.

Question S4W-24917: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015

To ask the Scottish Government how many times Police Scotland, or the legacy forces, accessed (a) the Police National Database and (b) other database to use facial recognition technology in each year since 2007.

Answered by Michael Matheson (25/03/2015):

The information requested is a matter for Police Scotland. I have alerted the Chief Constable to your question and I have asked him to reply to you direct.

Question S4W-24916: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015

To ask the Scottish Government whether Police Scotland maintains a database of images that it uses for facial recognition purposes.

Answered by Michael Matheson (25/03/2015):

The information requested is a matter for Police Scotland. I have alerted the Chief Constable to your question and I have asked him to reply to you direct.

Motion S4M-12676: Alison McInnes, North East Scotland, Scottish Liberal Democrats, Date Lodged: 16/03/2015

Police use of Images with Facial Recognition Technology

That the Parliament understands that police forces from across the UK have uploaded up to 18 million photographs to the Police National Database for use with facial recognition technology; is concerned that these images might include those of people never charged with an offence or who have been found innocent of a crime; notes the statement by the Chief Constable of Durham Constabulary on Newsnight on 2 February 2015 that, in a recent case in his constabulary, a person was identified using photographs from Scotland; further

notes the concerns of the Biometrics Commissioner, Alastair MacGregor QC, regarding the implications for civil liberties of the use of such technology; notes his comment that “urgent steps” should be taken to ensure that facial recognition and other biometric technologies should be governed by an appropriate regulatory regime; considers that, although facial recognition technology might be a useful policing tool, such technology must only be used with suitable safeguards and protection for innocent members of the public; believes that Police Scotland’s use of, or contribution of images to, the Police National Database, or any other database for facial recognition purposes, should be in the context of specific laws set by the Parliament, and considers that legislation similar to that agreed by the Parliament to govern the use of DNA profiles and fingerprints should be adopted to regulate the police use of images for facial recognition purposes and that police use of any new biometric identification technology in the future should be subject to similar regulation.

Supported by: Jim Hume, Liam McArthur, John Finnie, John Wilson, Tavish Scott, Willie Rennie

End.